Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

Summary of the Purpose of the Proposed Regulation

Background:

The State Legislature enacted the Electronic Waste Recycling Act of 2003 (EWRA) (Stats. 2003, ch. 526 (SB 20)) to eliminate electronic waste stockpiles and legacy devices, including waste Cathode Ray Tube (CRT) devices and CRTs, by providing a comprehensive and innovative system for their reuse, recycling, and proper and legal disposal. The EWRA authorizes the Department of Toxic Substances Control (DTSC) and the California Integrated Waste Management Board ("CIWMB," now known as the Department of Resources Recycling and Recovery, or CalRecycle) to expressly adopt emergency regulations to implement and enforce the EWRA.

The EWRA authorizes DTSC to adopt alternative management standards for electronic devices, including treatment or disposal standards, as an alternative to one or more of the management standards in chapter 6.5 of division 20 of the Health and Safety Code (commencing with sec. 25100) for any specified activity that involves the management of hazardous electronic waste, including CRT devices and CRTs. DTSC's 2004 emergency regulations (OAL Reference Number: 04-0526-01E) authorized treatment of CRT devices and CRTs (and CRT glass derived from such treatment) as universal wastes under alternative management standards, provided that the universal waste handler who treats CRT devices or CRTs (CRT recycler) sends the CRT glass for recycling to a CRT glass manufacturer or a primary or secondary lead smelter. These regulations were finalized in 2009 (OAL Reference Number: Z-2008-0616-03).

Also authorized by the EWRA, CalRecycle concurrently adopted emergency regulations (filed May 10, 2004, Register 2004, Number: 20) to establish a program that provides cost-reimbursement to CRT recyclers of discarded CRT devices and CRTs who render the CRTs unusable as CRTs by "cancelling" the waste CRT (i.e., releasing the vacuum inside the tube or crushing or shredding the CRT devices or CRTs pursuant to the treatment standards and other management requirements specified by DTSC in its emergency regulations). These regulations were finalized in 2006. This program is referred to as the Covered Electronic Waste (CEW) recycling program, which operates separately from, but is dependent on, the universal waste management standards adopted and enforced by DTSC. This program also provides for a financial incentive for CRT recycling while providing for regulatory oversight to prevent negative impacts on human health and the environment.

Purpose:

When DTSC implemented its alternative management standards in 2004, CRT glass manufacturers possessed a large capacity to use the amount of CRT glass generated from treatment of CRT devices and CRTs pursuant to DTSC's regulations. However, with the advancement of other types of technologies (e.g., flat screen televisions), the demand for the manufacturing of new CRTs has decreased to the extent that DTSC is concerned that the global CRT glass manufacturing market can no longer provide sufficient opportunities for CRT glass recycling. Lead smelters continue to accept some CRT glass but still do not show signs of having the capacity to significantly promote the recycling of the remaining CRT glass.

DTSC adopted emergency regulations in 2012 to expand the existing options for the disposition of CRTs and CRT glass currently regulated under DTSC's Universal Waste Regulations. Among other provisions, the emergency regulations added the option to dispose of CRTs and CRT glass to the existing options of

Page 1 of 14 July 6, 2018

Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

recycling the CRTs and CRT glass through CRT glass manufacturing and lead smelting. The effective – and successful – provisions of the 2012 emergency regulations are now being finalized in this proposed regulation.

Under the proposed disposal option, CRT devices, CRTs, and CRT glass are handled and treated as universal waste under alternative management standards until the treatment residuals are labeled, manifested, and transported by a registered hazardous waste transporter as fully regulated hazardous waste to a permitted hazardous waste disposal facility. Additionally, certain types of CRT glass (that do not contain lead and are properly separated from lead-containing CRT glass) may be disposed of in non-hazardous waste landfills (e.g., solid waste disposal facilities), if specific requirements are met. Other provisions of this proposed regulation require notifications to DTSC of CRT recyclers' intent to send CRTs and/or CRT glass to specific disposal facilities and descriptions of information to be kept as records by the CRT recyclers. These provisions are necessary to ensure the appropriate oversight measures are created to remain protective of human health and the environment, thus avoiding widespread abandonment or improper management of large quantities of this material in California, other states, or overseas.

Impacted Entities:

DTSC's existing universal waste regulations define and specify the roles of universal waste handlers of electronic devices (i.e., handlers) and those who perform some level of treatment upon the electronic devices, including CRT devices (i.e., handlers who treat or CRT recyclers) in California. The majority of recyclers only dismantle CRT devices with hand tools and segregate the components of the CRT device. A small group of recyclers have demonstrated the ability to perform treatment beyond dismantling (e.g., crushing, shredding, or breaking the CRTs into CRT glass). It is this group of CRT recyclers who are the most impacted by the proposed regulation or the expiration of the current emergency regulations allowing expanded disposition options for CRTs and CRT glass under universal waste management standards.

Baseline Scenario:

The economic and fiscal costs captured in this analysis are relative to a baseline scenario in which the proposed regulation is not adopted and the current emergency regulations expire. In the baseline scenario, any facility who accepts CRTs and CRT glass for the purposes of disposal would have to obtain a permit in order to accept, store, and treat CRTs and CRT glass. The group of universal waste handlers (impacted entities) identified above as CRT recyclers would have to obtain hazardous waste facility permits (standardized hazardous waste permits for the storage, treatment, and disposal of CRTs or request permit modifications), obtain financial assurance for the closure of the facility, and submit annual facility fees in order to accept, treat, and transport CRTs and CRT glass to a hazardous waste disposal facility. CRT recyclers would also have to take all of these same steps in order to send properly separated CRT panel glass to a nonhazardous waste landfill (i.e., CRT panel glass approved landfill). The CRT recyclers would still have the option under the existing universal waste regulations to send CRTs and CRT glass to CRT manufacturers or lead smelters without first obtaining a hazardous waste facility permit. This assumption is based on observed diminishing recycling options for universal waste handlers, leading to an increase in disposal of CRTs and CRT glass.

Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

Benefits:

This regulation allows CRT recyclers to handle and treat CRTs and CRT glass as universal waste handlers without needing to have a permit to accept, store, and treat the hazardous waste prior to disposal in a permitted hazardous waste facility. Although the universal waste handler must label, manifest, and transport the CRTs, and pay hazardous waste disposal fees, they are spared the expense of obtaining a hazardous waste facility permit, financial assurance for facility closure, and annual facility fees. The benefit of avoiding the expense and the relatively lengthy review process for obtaining hazardous waste facility permits will encourage proper and safe disposal of CRTs and CRT glass by universal waste handlers as the recycling market for CRT glass manufacturing disappears. Additionally, this regulation allows universal waste handlers to dispose of CRT panel glass (i.e., the non-leaded portion of a CRT) that is properly separated from the leaded portions of a CRT (and meets specified criteria, including testing requirements) in specified non-hazardous waste landfills in California. This is another cost avoidance benefit to the universal waste handler who chooses to dispose of CRT panel glass.

Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

ECONOMIC IMPACT STATEMENT

A. ESTIMATED PRIVATE SECTOR COST IMPACTS

3. Enter the total number of businesses impacted: Approximately 5 to 41

Describe the types of businesses (Include nonprofits):

There are approximately 35 CRT recyclers who treat CRT devices (e.g., discarded televisions and monitors), have notified DTSC of their intent to handle electronic waste, and are active in the e-waste system administered by DTSC and the CEW recycling program administered by CalRecycle under the EWRA. These CRT recyclers generate residual CRTs from treatment (i.e., dismantling) of CRT devices. Approximately five of the CRT recyclers have demonstrated that they can further treat (i.e., break CRTs into CRT glass) or process the CRTs into CRT glass. These proposed regulations will more directly impact those universal waste handlers who generate CRTs and CRT glass than those who only collect the intact CRT devices and send them to CRT recyclers.

In addition to the universal waste handlers who have notified DTSC of their intent to treat (e.g., dismantle CRT devices or break CRTs into CRT glass), the proposed regulations may also impact such businesses as permitted hazardous waste disposal facilities and nonhazardous waste landfills (i.e., solid waste landfills) commonly known as class II and class III landfills in California. DTSC annual reports indicate that five landfills in California (three permitted hazardous waste disposal facilities and two nonhazardous waste landfills) have accepted CRTs, CRT glass, or CRT panel glass. The hazardous waste disposal facilities may receive increased quantities of CRTs and/or CRT glass, and the nonhazardous waste landfills may receive increased quantities of CRT panel glass, as the proposed regulations allow for the disposal of these CRT device treatment residuals.

Enter the number or percentage of total businesses impacted that are small businesses: 85%

Government Code section 11346.3 indicates that a small business has fewer than 100 employees. DTSC, using data from Dun & Bradstreet, identified 2 of the approximate 35 universal waste handlers who have notified DTSC of their treatment activities (i.e., recyclers) may have 100 or more employees, and thus may be considered "large" businesses. Additionally, 4 of the 5 landfills that have accepted CRTs and/or CRT glass in California may be considered large businesses. Together, 6 of 40 impacted businesses, or 15%, may be considered large businesses. Therefore, approximately 85% of potentially impacted businesses are small businesses.

4. The number of businesses created or eliminated within the State of California: 0 (both)

Explain: The disposal options and the documentation requirements in the proposed regulations will not create or eliminate businesses within the State of California. There is a potential increase in the quantity of waste received by existing permitted hazardous waste disposal facilities and nonhazardous waste landfills in California due to the disposal provisions of the proposed regulations. However, DTSC does not anticipate that new disposal facilities will be created in response to the potential increase of waste, as it will not create a significant increase in the total waste intake of the landfills that may accept the waste. In 2016, CRT panel glass represented less than 1 percent of the total volume received by

Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

nonhazardous waste landfills according to data.¹ Likewise, the quantity of waste CRTs and CRT glass was a negligible percentage of the total volume received by permitted hazardous waste disposal facilities located in California. DTSC also does not anticipate that new CRT recyclers will be created as the amount of CRT devices entering the waste stream is not increasing, but rather gradually decreasing.²

6. The number of jobs created or eliminated within the State of California: <u>Unknown created/0</u> eliminated

Describe the types of jobs or occupations impacted: The disposal options and the documentation requirements in the proposed regulations will not create or eliminate jobs within the State of California. There is a potential increase in the quantity of waste received by permitted hazardous waste disposal facilities and nonhazardous waste landfills in California due to the disposal provisions of the proposed regulations. As discussed in the explanation for 4 above, this potential increase is not significant in terms of the total waste intake of the landfills that may accept the CRTs, CRT glass, and/or CRT panel glass. Therefore, DTSC is not able to quantify the increased workload or the need for additional positions at the disposal facilities that may result from this proposed regulation.

B. ESTIMATED COSTS

1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime?

This regulation finalizes the option of disposing of CRTs and CRT glass as a hazardous waste in permitted hazardous waste disposal facilities for CRT recyclers who dismantle CRT devices and further treat the CRTs and CRT glass under the universal waste regulations. The regulation allows the CRT recyclers to handle and treat CRTs and CRT glass without needing to have a permit to store, treat, and dispose the hazardous waste CRTs and CRT glass. The proposed regulation also allows the CRT recyclers to dispose of CRT panel glass (i.e., the non-leaded portion of a CRT) that is properly separated from the leaded portions of a CRT and meets specified criteria, including testing requirements; in specified nonhazardous waste landfills in California. The universal waste recycler avoids the expense of manifests, hazardous waste transportation, and the hazardous waste disposal fee for CRT panel glass, which is a significant portion (approximately 65%) of the total CRT. Without this regulation, a universal waste recycler would have to apply to DTSC for a standardized permit for storage, treatment, and disposal of CRT panel glass.

Under this proposed regulation, the CRT recyclers are not required to apply for a full or standardized permit. Anyone who applies for a new permit, renewal of a permit, standardized permit or post closure permit or who is requesting certain permit modifications, is required to enter into a written agreement to reimburse DTSC for its costs incurred in processing the application or request. In addition to the cost

Page 5 of 14

¹ Solid Waste Landfilling Data As reported by the landfills for IWM Fee Assessment Sorted by Solid Waste Information System (SWIS) ID and shipment data from the Covered Electronic Waste Information System (CEWIS) database maintained by CalRecycle.

² As described by CalRecycle program summaries (e.g., Update on California's Covered Electronic Waste Recycling Program Implementation of the Electronic Waste Recycling Act of 2003 (SB 20, Sher) February 2017) and CalRecycle payment claim summaries.

Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

of obtaining a permit, the recyclers would also be subject to an annual facility fee determined by the size and type of facility. Without the adoption of this regulation and upon the expiration of the emergency regulations currently in effect, any universal waste recycler would have to obtain a permit in order to store, treat, and dispose of CRTs or CRT glass. Universal waste handlers may still send CRTs and CRT glass to CRT glass manufacturing and primary and secondary lead smelting, without having to obtain a permit or authorization from DTSC, but these options are limited, hence the necessity of the disposal option in this proposed regulation. Therefore, initial and annual ongoing costs for a small or atypical business (e.g., universal waste recycler) are labeled as cost avoidance for **1a.** and **1b.** on the STD. 399 form. There is no cost for individuals to comply with this regulation over its lifetime as shown in **1c.** on the STD 399 form.

Additionally, this regulation requires universal waste handlers, who do not further process CRTs into CRT glass, to ensure (through documentation) that the CRTs are legitimately recycled, disposed, or shipped to another authorized universal waste handler for further treatment. This includes having contractual arrangements with an intermediate facility (e.g., out-of-state recycler) to treat the CRTs into CRT glass prior to receipt at a CRT glass manufacturer or lead smelter. These documentation requirements, as well as the notifications for disposal discussed below (in the explanation for B3), incur nominal costs to the affected CRT recyclers which are outweighed by avoidance of the cost of applying for a standardized permit for storage, treatment, and disposal of CRTs, CRT glass, and/or CRT panel glass.

Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

B. ESTIMATED COSTS (cont.)

1. Estimation of Avoided Costs

Assumptions used to estimate costs for facilities that accept CRTs for the purposes of disposal, which are avoided by the implementation of the proposed regulation:

Assumptions:
CRTs and CRT glass continue to be recycled legally
Five (5) universal waste handlers that currently treat CRTs into CRT glass in California will seek
standardized permits (or a permit modification) for the acceptance, storage, and transport of CRTs
and/or CRT glass
Approximate cost of obtaining a standardized permit is \$250,000 per facility
Those who obtain permits will pay a Series A Standardized Facility Fee of \$11,730 annually
Permit holders will assemble Closure Plans (closure financial assurance for clean closure)
The average closure plan and financial assurance will be \$100,000 per facility

Quantity	Cost per Facility	Initial Costs (Non-Yearly)	Yearly Costs
5 Facilities	\$250,000 cost reimbursement agreement for permit application (Initial; every ten years after)	\$1,250,000	\$0
5 Facilities	\$100,000 for Closure Plan (closure financial assurance for clean closure)	\$500,000	\$0
5 Facilities	\$11,730 Annual Permit Facility Fee	N/A	\$58,650
	Sum of Costs =	\$1,750,000	\$58,650

The following is taken from:

DTSC Annual Fee Summary Fee Rates for Calendar Year January 1, 2017 through December 31, 2017 (Revised 7/19/2017)

<u>Activity Fees for Permitting – (Now a cost reimbursement agreement)</u> for anyone applying for a new permit, renewal of a permit, standardized permit or post closure permit, or requesting certain permit modifications to enter into a written agreement to reimburse DTSC for its costs incurred in processing the application or request. This requirement also applies to requests for variances and waste classification determinations.

Estimate of **\$250,000** per facility, for storage permit applications. This is an estimate, not directly indicated by the fee summary.

Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

Table 6: Standardized Permit for CY 2017

<u>Standardized Permit Facility Fees</u> - Any facility treating, storing, or disposing of hazardous waste in California must have a hazardous waste facility permit.

\$11,730 for Standardized Permit Facility Fee per year.

3. If the regulation imposes reporting requirements, enter the annual costs a typical business may incur to comply with these requirements. *Include the dollar costs to do programming, record keeping, reporting, and other paperwork, whether or not the paperwork must be submitted.* \$800

The proposed regulation does require universal waste handlers to notify DTSC of their intent to dispose of CRTs or CRT glass. Universal waste handlers already submit notifications to DTSC, such as the Notice of Intent to Handle and/or Treat or Recycle Electronic Devices, CRTs and/or CRT glass; and the notification for export of electronic devices, CRTs, or CRT glass. The additional costs incurred by adding the disposal notification would be a slight incremental increase in effort for the universal waste handlers. The annual costs to a typical business based on a stakeholder survey is approximately \$800. See table below.

General Administrative Costs (from DTSC stakeholder survey)	Initial	Annual
Additional notifications (disposal)	\$1,200	\$0
Additional recordkeeping (ongoing)	\$800	\$800
Sum of Costs:	\$2000	\$800

5. Are there comparable Federal regulations? No

Explain the need for State regulation given the existence or absence of Federal regulations:

The U.S. EPA does not regulate CRTs or CRT glass as universal wastes. Instead, under U.S. EPA's "2006 CRT Rule" and "2014 CRT Export Rule" (40 C.F.R. §§ 260-261, 71 Fed. Reg. 42928 (Jul. 28, 2006),

Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

amended Jun. 26, 2014, 79 Fed. Reg. 36220, amended Nov. 28, 2016, 81 Fed. Reg. 85696), CRTs and CRT glass destined for recycling and CRTs exported for reuse are excluded from U.S. EPA's hazardous waste regulation if certain conditions are met. (See 40 C.F.R. subpart E (commencing with § 261.39)). If the CRTs are not managed as specified by these conditions, they are not excluded. The CRTs would then be considered hazardous waste (if they exhibit a hazardous waste characteristic) for purposes of U.S. EPA's regulation from the time they were "generated" (i.e., from the time the decision was made to dispose of them or to release the vacuum for recycling). Under the CRT Rule, processed CRT glass (glass removed from CRTs) that is sent to a CRT glass manufacturer or a lead smelter is not a solid waste, unless it is speculatively accumulated. If it is sent for other types of recycling (other than being used in a manner constituting disposal), it may also be excluded from the definition of a solid waste, and, therefore, would not be regulated by U.S. EPA as a hazardous waste if it meets the criteria of 40 Code of Federal Regulations part 261.2(e)(1)(ii). (See 71 Fed. Reg. 42928, 42929 (Jul. 28, 2006)).

The CRT Rule does not prohibit a State authorized to implement its hazardous waste program in lieu of the U.S. EPA program from regulating CRTs and CRT glass as fully regulated hazardous waste or as universal waste, or imposing more stringent requirements on persons generating or managing universal waste CRTs or CRT glass than those imposed by the CRT Rule or other U.S. EPA regulations. (See 71 Fed. Reg. 42928 (Jul. 28, 2006)).

This regulation is necessary to provide a path for disposal for those universal waste handlers who already use the established universal waste recycling pathways for CRTs and CRT glass in state law, should it become a necessary option. The CRTs and CRT glass would remain under universal waste management until the decision to dispose is made.

C. ESTIMATED BENEFITS

1. Briefly summarize the benefits of the regulation, which may include among others, the health and welfare of California residents, worker safety and the State's environment:

As mentioned above, this regulation allows the CRT recyclers to handle and treat CRTs and CRT glass as universal waste handlers without needing to have a permit to accept, store, and treat the hazardous waste prior to disposal in a permitted hazardous waste facility. Although the universal waste handler must label, manifest, transport, and pay hazardous waste disposal fees, they are spared the expense of obtaining a hazardous waste facility permit, financial assurance for facility closure, and the subsequent annual facility fees. The benefit of avoiding the expense and the relatively lengthy review process for obtaining hazardous waste facility permits will encourage proper and safe disposal of CRTs and CRT glass by universal waste handlers as the recycling market for CRT glass manufacturing disappears.

Additionally, this regulation allows universal waste handlers to dispose of CRT panel glass (i.e., the non-leaded portion of a CRT) that is properly separated from the leaded portions of a CRT and meets specified criteria, including testing requirements; in specified nonhazardous waste landfills in California. This is another cost avoidance benefit to the universal waste handler who chooses to dispose of CRT panel glass. The handler avoids the expense of manifests, hazardous waste transportation, and the hazardous waste disposal fee for CRT panel glass which is a significant portion (approximately 65% of the weight) of the total CRT glass. These regulations provide an overall benefit of a safe disposition

Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

option for this voluminous hazardous waste and maintains the ability of collectors and recyclers to be reimbursed for costs under the EWRA payment system. Also, the added documentation requirements required by these regulations serve to deter or prevent the stockpiling and abandonment of CRTs and CRT glass in California, in other states, and abroad.

2. Are the benefits the result of specific statutory requirements, or goals developed by the agency based on broad statutory authority?

Explain: The benefits of this regulation result from the specific statutory authority of the Electronic Waste Recycling Act of 2003(Stats. 2003, ch. 526) as amended by SB 50 (Stats. 2004, ch. 863) on September 29, 2004.

3. What are the total statewide benefits from this regulation over its lifetime?

The total statewide benefits are not quantifiable as DTSC cannot predict how many universal waste handlers will choose to maintain or pursue the disposal options.

4. Briefly describe any expansion of businesses currently doing business within the State of California that would result from this regulation: None

DTSC does not anticipate any appreciable expansion of businesses (currently doing business in California) due to the proposed regulations.

D. ALTERNATIVES TO THE REGULATION

1. List alternatives considered and describe them below. If no alternatives were considered, explain why not:

The following alternatives are those not chosen in the proposed regulation. The recommended alternative is not listed here as it has already been addressed in previous sections of this analysis. Likewise, the no action alternative has been addressed as the scenario in which permits would be required for the disposal of CRTs and CRT glass and panel glass (see **(B)(1) Estimation of Avoided Costs** above).

Alternative 1:

Amend Universal Waste regulations to allow recycling by means other than the existing specified recycling pathways (i.e., reclamation of CRT glass at a CRT glass manufacturer or primary or secondary lead smelter). This alternative allows the universal waste handler to determine whether the CRT glass can be recycled as an excluded recyclable material (ERM) and includes an entire article outlining an optional ERM concurrence process offered by DTSC to assist the universal waste handlers to determine whether the CRT glass is excluded from regulation as hazardous waste for specific alternative recycling methods. This provision requires the universal waste handlers to determine if their CRTs and/or CRT glass are recyclable material excluded from regulation as hazardous wastes pursuant to Health and Safety Code subdivisions 25143.2(b) and 25143.2(d), as required by California Code of Regulations, title 22, section 66262.11(a), when recycled by other means. DTSC found that applicants of the concurrence process could not demonstrate that the requirements under Health and Safety Code subdivisions

Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

25143.2(b) and 25143.2(d) were met for their proposed alternative recycling method. Currently, DTSC does not know of any CRT recyclers who have successfully used the expanded recycling options added by the emergency regulations – as ERM or otherwise. While some recyclers have evaluated recycling options other than CRT glass manufacturing or primary or secondary lead smelting that would allow them to manage their CRTs or CRT glass as ERM, none have pursued such options primarily because CRT recyclers cannot determine the benefit the CRT glass would provide for such uses (a condition to manage the material as an ERM), nor have they been able to assemble the documentation demonstrating that the material qualifies as ERM (i.e., no proof of end product and sales of product). Therefore, DTSC has no information upon which to assess a benefit or cost to this alternative.

Alternative 2:

Amend Universal Waste regulations by DTSC identifying and listing only specific recycling options in addition to CRT glass manufacturing and primary and secondary lead smelting. This alternative was considered but not included in the emergency regulations mentioned above, as no known viable alternative recycling option had been identified. Again, DTSC has no information upon which to assess a benefit or cost to this alternative.

4. Rulemaking law requires agencies to consider performance standards as an alternative, if a regulation mandates the use of specific technologies or equipment, or prescribes specific actions or procedures. Were performance standards considered to lower compliance costs?

Explain: The regulations do not mandate the use of specific technologies or equipment. The regulations do not mandate the method by which to separate CRT panel glass from CRT funnel glass (as required for disposal of CRT panel glass in nonhazardous waste landfills) or the form in which contractual information and confirmation of receipt at final disposition is documented if CRTs and/or CRT glass are shipped to an intermediate facility. However, in order to ensure accurate testing of CRT panel glass as required in article 8 of the regulations, specific sampling methods and analysis methods are prescribed. This is necessary to ensure that the CRT panel glass is accurately characterized as a hazardous waste, and appropriately and safely disposed according to Health and Safety Code section 25141.5

E. MAJOR REGULATIONS

5. Briefly describe the following:

The increase or decrease of investment in the State:

DTSC is not aware of any increase or decrease of investment in the State that will result from the implementation of this proposed regulation.

The incentive for innovation in products, materials or processes:

DTSC is not aware of any incentive for innovation in products, materials, or processes that will result from this proposed regulation.

Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

The benefits of the regulations, including, but not limited to, benefits to the health, safety, and welfare of California residents, worker safety, and the state's environment and quality of life, among any other benefits identified by the agency:

This proposed regulation will provide an overall benefit of a safe and effective disposition option for this hazardous waste of significant volume, which maintains the ability of collectors and recyclers to be reimbursed for costs under the EWRA payment system. This regulation allows universal waste handlers in California to collect, treat, and process CRTs and CRT glass destined for safe disposal in specified landfills under universal waste management standards. These alternative management standards (in lieu of full hazardous waste management) for the handling and processing of CRTs and CRT glass will encourage proper and safe disposal as the recycling market for CRT glass manufacturing disappears and a safe and viable recycling outlet has not yet developed. Also, the added documentation requirements required by these regulations serve to deter improper handling or disposal, and prevent the stockpiling and abandonment of CRTs and CRT glass in California, in other states, and abroad.

Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

FISCAL IMPACT STATEMENT

B. FISCAL EFFECT ON STATE GOVERNMENT

4. Other. Explain

The proposed regulation will not lead to additional state costs, as the fiscal costs will be absorbed with existing resources. The fiscal costs to be absorbed will be \$\frac{\xi}{0}\$ in Fiscal Year 2017/2018; \$\frac{\xi}{35,385}\$ in Fiscal Year 2018/2019; and \$\frac{\xi}{3,491}\$ in Fiscal Year 2019/2020 as shown below.

Calculations for Fiscal Effect on State Government with the adoption of the proposed regulation:

Task (Yearly per Facility)	Staff Classification	Estimated Time (hours)	Conversion to PY (1718)	Cost of PY	Total Cost
Review notifications /demonstration documents	Environmental Scientist (ES)	8	.005	\$90,474	\$452
Total Cost per facility					\$452
Total Cost per 5 facilities					\$2,260

Task (Yearly)	Staff Classification	Estimated Time (hours)	Conversion to PY (1718)	Cost of PY	Total Cost
Provide program information and guidance	Senior ES (Spec)	20	.01	\$123,104	\$1,231
Total cost					\$1,231

Task (Initial)	Staff Classification	Estimated Time (Hours)	Conversion to PY (1718)	Cost of PY	Total Cost
Train inspectors	Senior ES (Sup)	24	.014	\$175,015	\$ 2,450
Inspector training hours (10 hrs, 55 inspectors)	ES	550	.32	\$90,474	\$28,952
Revise inspection checklist	Senior ES (Spec)	8	.004	\$123,104	\$492
Total cost					\$31,894

Calculations for Fiscal Effect on State Government without the adoption of proposed regulation:

Reimbursable Tasks (One Time/Start-Up)	Estimated Total Cost	Cost Reimbursement by Applicant to DTSC	Total Net Cost to DTSC
DTSC process for Standardized Permit Application	\$250,000	\$250,000	\$0
Total cost per facility			\$0

Disposition Options for Universal Waste Cathode Ray Tubes (CRTs) and CRT Glass

Current fiscal year (fiscal year in which regulation is approved by DTSC) is fiscal year 2017/2018

Potential Total Cost (Fiscal Year 2017/2018) = \$0

No cost, as regulations become effective in Fiscal Year 2018/2019

Potential Total Cost (Fiscal Year 2018/2019) = \$35,385

[Review notifications (\$2,260) + program guidance (\$1,231) + staff training (\$31,894)]

Potential Total Cost (Fiscal Year 2019/2020 = \$3,491

[Review notifications (\$2,260) + program guidance (\$1,231)]